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Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 09/872,146 | Applicant(s) CHEN ET AL. | |
|---|---|---|---|
| | Examiner Michael J Molinari | Art Unit 2665 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *31 December 2002* .

2a)☒ This action is FINAL. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) *2,7 and 12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6,8-11 and 13-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 August 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Drawings*

1. The corrected or substitute drawings were received on 20 August 2002. These drawings are accepted by the Examiner.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 3-5, 6, 8-11, 13-32 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification discloses interface cards and discloses that the interface cards can receive two different types of traffic but fails to disclose how the two different types of traffic are received and processed differently. Pages 9-10 of the disclosure seem to suggest the same processing procedure for both TDM traffic and for packet traffic received from the line interface. It is not clear to what device "the same card" refers on page 9, paragraph 0027, line 4. Furthermore, the specification does not clearly describe the type of interface(s) or how it/they receive(s)/transmit(s) the two types of traffic differently. For these reasons the disclosure would not enable a person skilled in the art to make and/or use the invention.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 34 refers to "the plurality of buffers in the backplane interface", which lack antecedent basis. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3-5, 11, 13-20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Surprenant et al. (U.S. Patent No. 6,266,341) in view of Brady (U.S. Patent No. 6,226,287).

5. Referring to claim 1, Surprenant et al. disclose a network switch (office communications system) comprising a backplane (TDM Bus), a plurality of interface cards coupled to the backplane via an interface (see Fig. 3), the interface cards coupled to receive multiple channels of network traffic from external sources (such as POTS, T-1/PRI, ATM, etc., see Fig. 3), the plurality of interface cards to receive one or more channels of data according to a TDM protocol (POTS or T-1/PRI) or one or more channels of data according to a second protocol (ATM), the

interface cards to route the channels of data over the backplane using a single format (see column 8, lines 35-44, which describes that the data are transmitted in TDM frames) to one or more predetermined interface cards (such as ATM card #82 to ATM controller card #79B in Fig. 3). However, Surprenant et al. differ from claim 1 in that they fail to disclose the use of multiple protocols on a single card. However, the use of multiple protocols on a single card is well known in the art. For example, Brady teaches the use of multiple protocols on a single card (see column 3, lines 50-56), which has the advantage of reducing cost. One skilled in the art would have recognized the advantage of using multiple protocols on a single card as taught by Brady. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of multiple protocols on a single interface card as taught by Brady into the office communications system of Surprenant et al. to achieve the advantage of reducing cost.

6. Referring to claim 3, Surprenant et al. disclose that the second protocol is a network traffic protocol. Specifically, they disclose that it is ATM, which is a network traffic protocol (see Fig. 3 and see column 8, lines 59-67 and column 9, lines 1-3).

7. Referring to claim 4, Surprenant et al. disclose that the second protocol is ATM (see Fig. 3 and see column 8, lines 59-67 and column 9, lines 1-3).

8. Referring to claim 5, Surprenant et al. fail to expressly disclose that the second protocol comprises Internet Protocol (IP). However, Surprenant et al. do disclose the use of "other WAN-type network services as determined by the particular office work environment" (see column 9, lines 1-3). IP is an extremely common WAN-type network service in many office work environments. A person with skill in the art would have recognized this. Therefore, it would

have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of IP as a network traffic protocol in the office communications system of Surprenant et al. to achieve the advantage of making it compatible with a greater number of office work environments.

9. Referring to claim 11, Surprenant et al. disclose a method comprising receiving multiple channels of network traffic from external sources via a network interface (see Fig. 3, network interface not numbered) of an interface card (see Fig. 3, #82), wherein the multiple channels of network traffic to include one or more channels of data according to a time division multiplexed (TDM) protocol (such as POTS or T-1/PRI, see Fig. 3) or one or more channels of data according to a second protocol (such as ATM, see Fig. 3); converting the TDM data and the second protocol data to a predetermined format (see column 8, lines 32-58, which discloses that the Switch/MUX card requires multiplexing circuitry to access the bus by putting the data into TDM frames. Although Surprenant et al. do not explicitly disclose it, one skilled in the art would have recognized that it would have been obvious to provide all the cards connected to the TDM bus with such circuitry to enable each of them to communicate over the TDM bus); and routing the channels of data in the predetermined format (TDM frames, see column 8, lines 32-44) via a backplane (TDM Bus, see Fig. 3) connection (see Fig. 3, backplane connection not numbered) to one or more predetermined destinations (see column 8, lines 59-67 and column 9, lines 1-3). However, Surprenant et al. differ from claim 11 in that they fail to disclose the use of multiple protocols on a single card. However, the use of multiple protocols on a single card is well known in the art. For example, Brady teaches the use of multiple protocols on a single card (see column 3, lines 50-56), which has the advantage of reducing cost. One skilled in the art

would have recognized the advantage of using multiple protocols on a single card as taught by Brady. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of multiple protocols on a single interface card as taught by Brady into the office communications system of Surprenant et al. to achieve the advantage of reducing cost.

10. Referring to claim 13, Surprenant et al. disclose that the second protocol is a network traffic protocol. Specifically, they disclose that it is ATM, which is a network traffic protocol (see Fig. 3 and see column 8, lines 59-67 and column 9, lines 1-3).

11. Referring to claim 14, Surprenant et al. disclose that the second protocol is ATM (see Fig. 3 and see column 8, lines 59-67 and column 9, lines 1-3).

12. Referring to claim 15, Surprenant et al. fail to expressly disclose that the second protocol comprises Internet Protocol (IP). However, Surprenant et al. do disclose the use of "other WAN-type network services as determined by the particular office work environment" (see column 9, lines 1-3). IP is an extremely common WAN-type network service in many office work environments. A person with skill in the art would have recognized this. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of IP as a network traffic protocol in the office communications system of Surprenant et al. to achieve the advantage of making it compatible with a greater number of office work environments.

13. Referring to claim 16, Surprenant et al. disclose an apparatus (office communications system) comprising means for receiving multiple channels of network traffic from external sources via a network interface (see Fig. 3, network interface not numbered) of an interface card

(see Fig. 3, #82), wherein the multiple channels of network traffic to include one or more channels of data according to a time division multiplexed (TDM) protocol (such as POTS or T-1/PRI, see Fig. 3) or one or more channels of data according to a second protocol (such as ATM, see Fig. 3); means for converting the TDM data and the second protocol data to a predetermined format (see column 8, lines 32-58, which discloses that the Switch/MUX card requires multiplexing circuitry to access the bus by putting the data into TDM frames. Although Surprenant et al. do not explicitly disclose it, one skilled in the art would have recognized that it would have been obvious to provide all the cards connected to the TDM bus with such circuitry to enable each of them to communicate over the TDM bus); and means for routing the channels of data in the predetermined format (TDM frames, see column 8, lines 32-44) via a backplane (TDM Bus) connection (see Fig. 3, backplane connection not numbered) to one or more predetermined destinations (see column 8, lines 59-67 and column 9, lines 1-3). However, Surprenant et al. differ from claim 11 in that they fail to disclose the use of multiple protocols on a single card. However, the use of multiple protocols on a single card is well known in the art. For example, Brady teaches the use of multiple protocols on a single card (see column 3, lines 50-56), which has the advantage of reducing cost. One skilled in the art would have recognized the advantage of using multiple protocols on a single card as taught by Brady. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of multiple protocols on a single interface card as taught by Brady into the office communications system of Surprenant et al. to achieve the advantage of reducing cost.

14. Referring to claim 17, Surprenant et al. disclose that the second protocol is a network traffic protocol. Specifically, they disclose that it is ATM, which is a network traffic protocol (see Fig. 3 and see column 8, lines 59-67 and column 9, lines 1-3).

15. Referring to claim 18, Surprenant et al. disclose that the second protocol is ATM (see Fig. 3 and see column 8, lines 59-67 and column 9, lines 1-3).

16. Referring to claim 19, Surprenant et al. fail to expressly disclose that the second protocol comprises Internet Protocol (IP). However, Surprenant et al. do disclose the use of "other WAN-type network services as determined by the particular office work environment" (see column 9, lines 1-3). IP is an extremely common WAN-type network service in many office work environments. A person with skill in the art would have recognized this. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of IP as a network traffic protocol in the office communications system of Surprenant et al. to achieve the advantage of making it compatible with a greater number of office work environments.

17. Referring to claim 20, Surprenant et al. disclose that one or more of the interface cards receives electrical signals to communicate the network traffic (see column 5, line 64, and note that Ethernet ports receive electrical signals to communicate network traffic).

18. Referring to claim 23, Surprenant et al. disclose that one or more of the interface cards receives electrical signals to communicate the network traffic (see column 5, line 64, and note that Ethernet ports receive electrical signals to communicate network traffic).

19. Claims 6, 8-10, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Surprenant et al. (U.S. Patent No. 6,266,341) in view of Brady (U.S. Patent No. 6,226,287), further in view of Degges et al. (U.S. Patent No. 5,953,329).

20. Referring to claim 6, Surprenant et al. disclose an interface card (see Fig. 3, #82) comprising a backplane interface (see Fig. 3, backplane interface is not numbered) to transmit and receive data over a backplane (TDM Bus, see Fig. 3) using a predetermined format (see column 8, lines 35-44, which describes that the data are transmitted in TDM frames); a network interface (see Fig. 3, network interface is not numbered) to transmit and receive multiple channels of network traffic from external sources, the multiple channels of network traffic to include one or more channels of data according to a time division multiplexed (TDM) protocol or one or more channels of data according to a second protocol; and conversion circuitry to convert the TDM data and the second protocol data to the predetermined format (see column 8, lines 32-58, which discloses that the Switch/MUX card requires multiplexing circuitry to access the bus. Although Surprenant et al. do not explicitly disclose it, one skilled in the art would have recognized that it would have been obvious to provide all the cards connected to the TDM bus with such circuitry to enable each of them to communicate over the TDM bus). Surprenant et al. differ from claim 6 in that they fail to disclose the use of multiple protocols on a single card. However, the use of multiple protocols on a single card is well known in the art. For example, Brady teaches the use of multiple protocols on a single card (see column 3, lines 50-56), which has the advantage of reducing cost. One skilled in the art would have recognized the advantage of using multiple protocols on a single card as taught by Brady. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the

use of multiple protocols on a single interface card as taught by Brady into the office communications system of Surprenant et al. to achieve the advantage of reducing cost. Surprenant et al. in view of Brady do not disclose the use of a time slot management circuit coupled between the backplane interface and the network interface, the time slot management circuit to route the channels of data over the backplane to one or more predetermined destinations. However, the use of time slot managers in TDM cards is well known in the art. For example, Degges et al. teach the use of a time slot manager on a T-1 card (see column 10, lines 20-30), which has the advantage of enabling the card to handle TDM traffic. One skilled in the art would have recognized the advantage of using a time slot manager in a TDM card as taught by Degges et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of a time slot manager as taught by Degges et al. into the invention of Surprenant et al. in view of Brady to achieve the advantage of enabling the card to handle TDM traffic.

21. Referring to claim 8, Surprenant et al. disclose that the second protocol is a network traffic protocol. Specifically, they disclose that it is ATM, which is a network traffic protocol (see Fig. 3 and see column 8, lines 59-67 and column 9, lines 1-3).

22. Referring to claim 9, Surprenant et al. disclose that the second protocol is ATM (see Fig. 3 and see column 8, lines 59-67 and column 9, lines 1-3).

23. Referring to claim 10, Surprenant et al. fail to expressly disclose that the second protocol comprises Internet Protocol (IP). However, Surprenant et al. do disclose the use of "other WAN-type network services as determined by the particular office work environment" (see column 9, lines 1-3). IP is an extremely common WAN-type network service in many office work

environments. A person with skill in the art would have recognized this. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of IP as a network traffic protocol in the office communications system of Surprenant et al. to achieve the advantage of making it compatible with a greater number of office work environments.

24. Referring to claim 26, Surprenant et al. disclose that the network interface (port) receives one or more channels of network traffic as electrical signals (see column 5, line 64, and note that Ethernet ports receive electrical signals to communicate network traffic).

25. Claims 21-22, 24-25, 29, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Surprenant et al. (U.S. Patent No. 6,266,341) in view of Brady (U.S. Patent No. 6,226,287), further in view of DeNap et al. (U.S. Patent No. 6,407,997).

26. Referring to claim 21, Surprenant et al. in view of Brady fail to disclose that one or more of the interface cards receives optical signals to communicate the network traffic. However, the use of optical signals to communicate network traffic is well known in the art. For example, DeNap et al. teach the use of ATM/SONET with OC-3 (optical) interfaces which has the advantage of providing high-speed ATM interfaces. One skilled in the art would have recognized the advantage of using ATM/SONET with OC-3 interfaces as taught by DeNap et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of ATM/SONET with OC-3 interfaces as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady to achieve the advantage of providing high-speed ATM interfaces.

27. Referring to claim 22, Surprenant et al. in view of Brady fail to disclose that the optical signals comprise SONET-framed data. However, the use of optical signals comprising SONET-framed data to communicate network traffic is well known in the art. For example, DeNap et al. teach the use of ATM/SONET with OC-3 (optical) interfaces which has the advantage of providing high-speed ATM interfaces. One skilled in the art would have recognized the advantage of using ATM/SONET with OC-3 interfaces as taught by DeNap et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of ATM/SONET with OC-3 interfaces as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady to achieve the advantage of providing high-speed ATM interfaces.

28. Referring to claim 24, Surprenant et al. in view of Brady fail to disclose that one or more of the predetermined interface cards transmits optical signals. However, the use of optical signals to communicate network traffic is well known in the art. For example, DeNap et al. teach the use of ATM/SONET with OC-3 (optical) interfaces which has the advantage of providing high-speed ATM interfaces. One skilled in the art would have recognized the advantage of using ATM/SONET with OC-3 interfaces as taught by DeNap et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of ATM/SONET with OC-3 interfaces as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady to achieve the advantage of providing high-speed ATM interfaces.

29. Referring to claim 25, Surprenant et al. in view of Brady fail to disclose that the optical signals comprise SONET-framed data. However, the use of optical signals comprising SONET-

framed data to communicate network traffic is well known in the art. For example, DeNap et al. teach the use of ATM/SONET with OC-3 (optical) interfaces, which has the advantage of providing high-speed ATM interfaces. One skilled in the art would have recognized the advantage of using ATM/SONET with OC-3 interfaces as taught by DeNap et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of ATM/SONET with OC-3 interfaces as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady to achieve the advantage of providing high-speed ATM interfaces.

30. Referring to claim 29, Surprenant et al. in view of Brady teach the conversion of the received data to a TDM format for transmission over the backplane but fail to teach the conversion of the received data to an internal cell format for transmission over the backplane. However, conversion to an internal cell format for transmission over the backplane is well known in the art. For example, DeNap et al. teach conversion of received data to an internal cell format for transmission over the backplane (see column 6, lines 43-56) to achieve the advantage of improving utilization of the backplane. One skilled in the art would have recognized the advantage of converting received data to an internal cell format for transmission over the backplane as taught by DeNap et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the conversion of received data into an internal cell format for transmission over the backplane as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady to achieve the advantage of improving the utilization of the backplane.

31. Referring to claim 31, Surprenant et al. in view of Brady teach the conversion of data according to a TDM protocol and data according to a second protocol to a TDM format for transmission over the backplane but fail to teach the conversion of the received data to an internal cell format for transmission over the backplane. However, conversion to an internal cell format for transmission over the backplane is well known in the art. For example, DeNap et al. teach conversion of received data to an internal cell format for transmission over the backplane (see column 6, lines 43-56) to achieve the advantage of improving utilization of the backplane. One skilled in the art would have recognized the advantage of converting received data to an internal cell format for transmission over the backplane as taught by DeNap et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the conversion of received data into an internal cell format for transmission over the backplane as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady to achieve the advantage of improving the utilization of the backplane.

32. Referring to claim 32, Surprenant et al. in view of Brady teach the conversion of data according to a TDM protocol and data according to a second protocol to a TDM format for transmission over the backplane but fail to teach the conversion of the received data to an internal cell format for transmission over the backplane. However, conversion to an internal cell format for transmission over the backplane is well known in the art. For example, DeNap et al. teach conversion of received data to an internal cell format for transmission over the backplane (see column 6, lines 43-56) to achieve the advantage of improving utilization of the backplane. One skilled in the art would have recognized the advantage of converting received data to an internal cell format for transmission over the backplane as taught by DeNap et al. Therefore, it

would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the conversion of received data into an internal cell format for transmission over the backplane as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady to achieve the advantage of improving the utilization of the backplane.

33. Claims 27-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Surprenant et al. (U.S. Patent No. 6,266,341) in view of Brady (U.S. Patent No. 6,226,287), further in view of Degges et al. (U.S. Patent No. 5,953,329), further in view of DeNap et al. (U.S. Patent No. 6,407,997).

34. Referring to claim 27, Surprenant et al. in view of Brady, further in view of Degges et al. fail to disclose that the network interface receives one or more channels of network traffic as optical signals. However, the use of optical signals to communicate network traffic is well known in the art. For example, DeNap et al. teach the use of ATM/SONET with OC-3 (optical) interfaces which has the advantage of providing high-speed ATM interfaces. One skilled in the art would have recognized the advantage of using ATM/SONET with OC-3 interfaces as taught by DeNap et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of ATM/SONET with OC-3 interfaces as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady, further in view of Degges et al. to achieve the advantage of providing high-speed ATM interfaces.

35. Referring to claim 28, Surprenant et al. in view of Brady, further in view of Degges et al. fail to teach that the optical signals comprise SONET-framed data. However, the use of optical signals comprising SONET-framed data to communicate network traffic is well known in the art.

For example, DeNap et al. teach the use of ATM/SONET with OC-3 (optical) interfaces which has the advantage of providing high-speed ATM interfaces. One skilled in the art would have recognized the advantage of using ATM/SONET with OC-3 interfaces as taught by DeNap et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the use of ATM/SONET with OC-3 interfaces as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady, further in view of Degges et al. to achieve the advantage of providing high-speed ATM interfaces.

36. Referring to claim 30, Surprenant et al. in view of Brady, further in view of Degges et al. teach the conversion of the received data to a TDM format for transmission over the backplane but fail to teach the conversion of the received data to an internal cell format for transmission over the backplane. However, conversion to an internal cell format for transmission over the backplane is well known in the art. For example, DeNap et al. teach conversion of received data to an internal cell format for transmission over the backplane (see column 6, lines 43-56) to achieve the advantage of improving utilization of the backplane. One skilled in the art would have recognized the advantage of converting received data to an internal cell format for transmission over the backplane as taught by DeNap et al. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the conversion of received data into an internal cell format for transmission over the backplane as taught by DeNap et al. into the office communications system of Surprenant et al. in view of Brady, further in view of Degges et al. to achieve the advantage of improving the utilization of the backplane.

4. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Surprenant et al. in view of Brady as applied to claim 1 above, and further in view of Swenson et al. (U.S. Patent No. 5,541,921).

37. Referring to claim 33, Suprenant et al. disclose the use of an interface for accessing the TDM bus such as that in U.S. Patent No. 5,541,921 to Swenson et al. (see column 8, lines 46-54). The invention of Swenson et al. teaches the use of a plurality of buffers (see Swenson et al., Fig. 6), which are coupled with each of the other interface cards across the TDM bus as shown in Fig. 3 of Surprenant et al.

38. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Surprenant et al. in view of Brady, further in view of Degges et al. as applied to claim 6 above, and further in view of Swenson et al. (U.S. Patent No. 5,541,921).

39. Referring to claim 34, Suprenant et al. disclose the use of an interface for accessing the TDM bus such as that in U.S. Patent No. 5,541,921 to Swenson et al. (see column 8, lines 46-54). The invention of Swenson et al. teaches the use of a plurality of buffers (see Swenson et al., Fig. 6), which are coupled with each of the other interface cards across the TDM bus as shown in Fig. 3 of Surprenant et al. Swenson et al. further teach that each of their buffers corresponds to a network flow (IN1, IN2, see Fig. 6). Since the invention of Suprenant et al. is designed to facilitate communication by the cards with one another across the TDM bus, these network flows would thus correspond to the other remote cards to which the interface card is coupled across the TDM bus.

***Conclusion***

40. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Response to Arguments***

5. Referring to claims 1, 3-6, 8-11, and 13-32 that were rejected based on 35 U.S.C. 112, first paragraph, the applicant has argued that "whether or not the specification discloses how the two types of traffic are received and processed differently is irrelevant." The examiner respectfully disagrees. The core of the invention is a card that is capable of handling multiple types of data streams. ***How*** that card works to process the different types of traffic differently is central to the invention. The applicant has also claimed that paragraph 0008 may be helpful. Although the examiner appreciates any help in clarifying the issue, this particular paragraph is not particularly helpful in this case. The claimed invention is a card that processes different

types of traffic differently. This paragraph explains how the traffic channels are configured, but does not explain how the card functions to process the different traffic channels differently.

6. Applicant's arguments with respect to claims 1, 3-6, 8-11, and 13-32 that were rejected based on 35 U.S.C. 103 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Molinari whose telephone number is (703) 305-5742. The examiner can normally be reached on Monday-Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703) 308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MJM

Michael Joseph Molinari
February 27, 2003

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